Estimating the health effects of retirement

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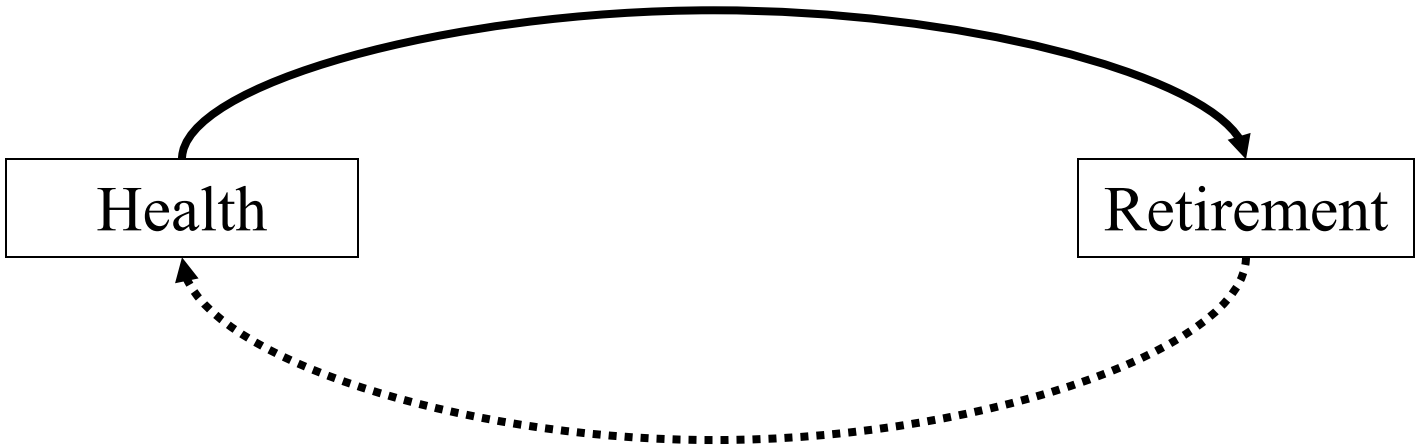
A two-way relationship?



Possible Reasons Retirement Might Effect Health

- Mentally or physically stressful work -- retiring could be good for a health
- Mental and physical activity at work might reduce health risks associated with inactivity – retiring could be bad for health

Previous Work

- Typically compares the health of individuals before and after they retire (e.g. Dave, Rashad and Spasojevic, 2006).
- Researchers following this strategy have often found that retirement has large negative effects on both physical and mental health.
- If deteriorating health leads individuals to retire, this approach will tend to seriously exaggerate the negative effects of retirement on health.

Our Methodology

- Plot age-specific effects on each health outcome
- Estimate age trend in these effects using only pre-normal retirement age data
- Test for post-retirement age deviations from trend
  - All post-retirement ages
  - First 10 years

Health Outcomes

1. Physiological and biochemical markers – biomarkers for short.

2. Nagi items - Self reported physical limitation measures.

3. Self reported chronic conditions.

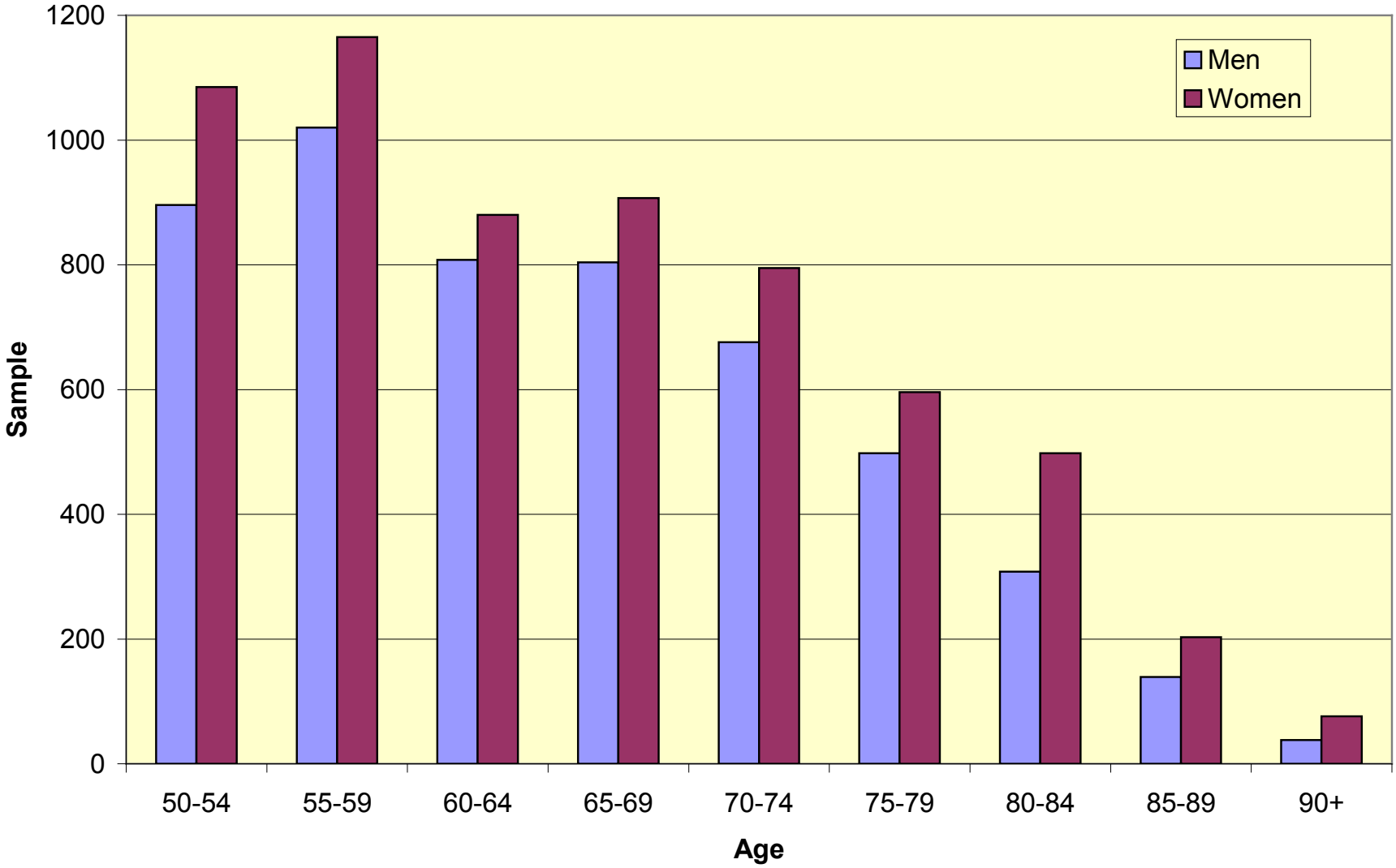
4. Mortality rates

Data

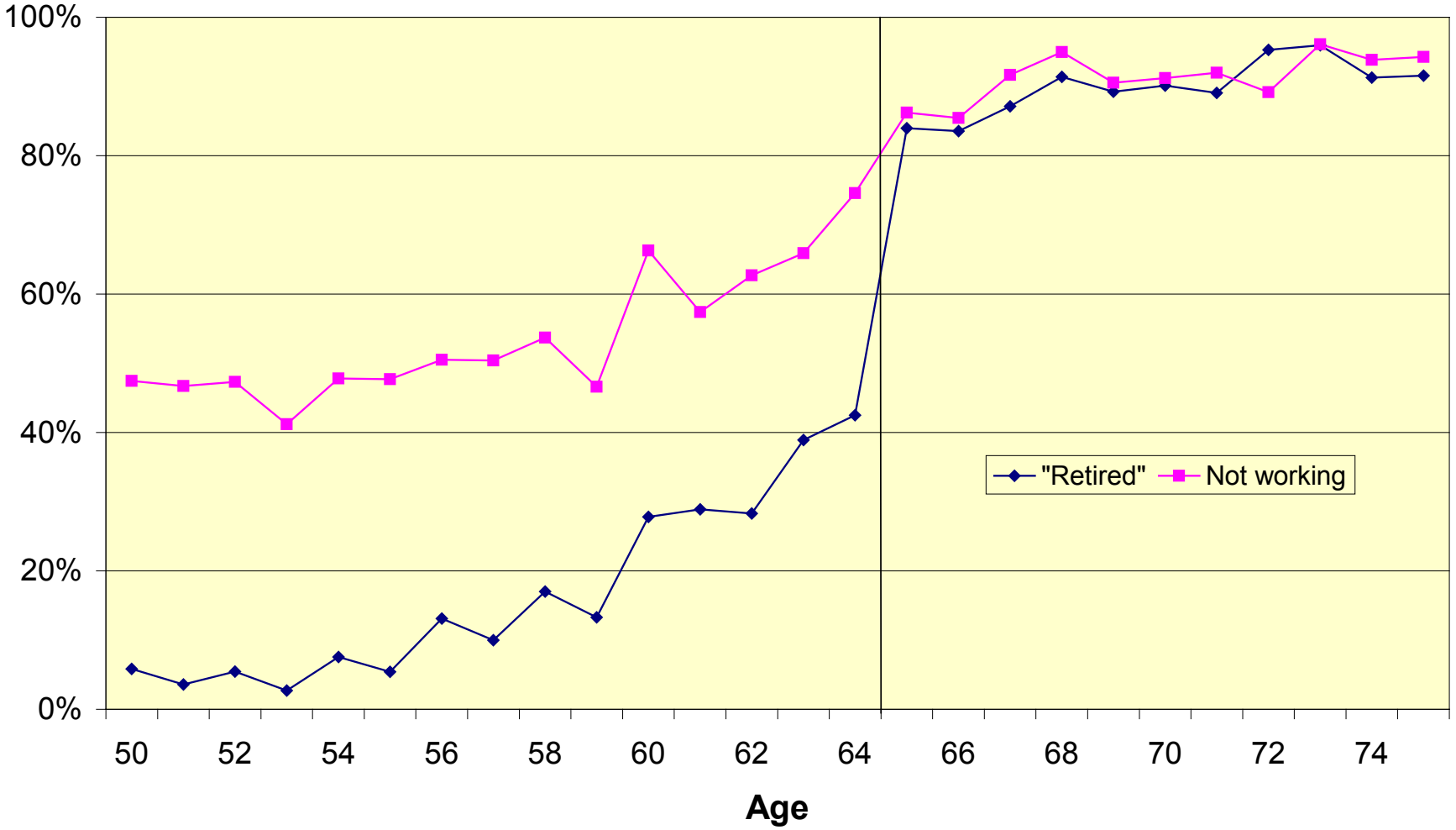
- English Longitudinal Study of Aging
  - This study uses data from wave 2 in 2004/5
  - Random sample of the English 50+ population at baseline in 2002/3.

- UK vital statistics data and population estimates for England and Wales (2005)

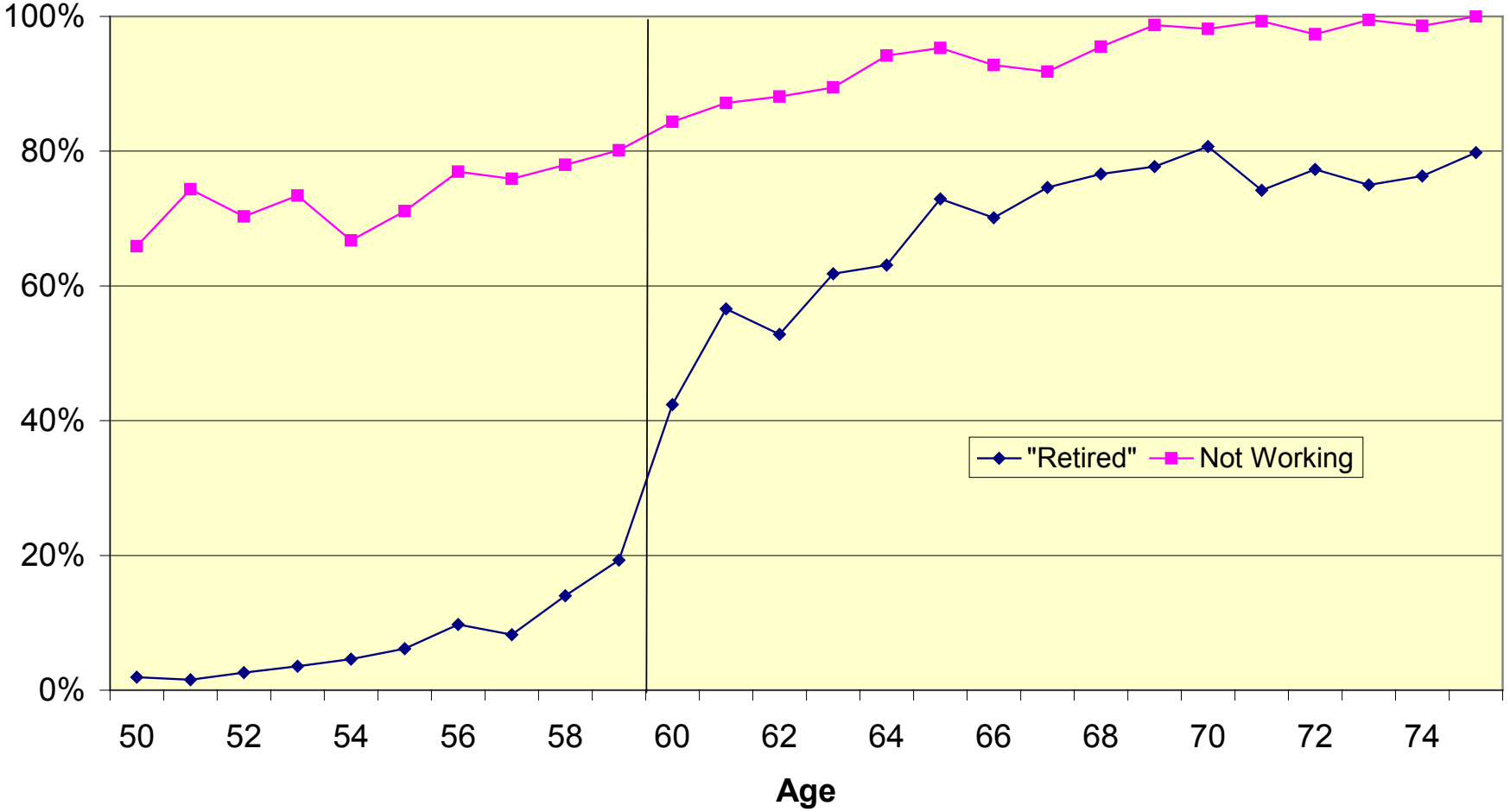
English Longitudinal Study of Aging, wave 1 (2002-3)



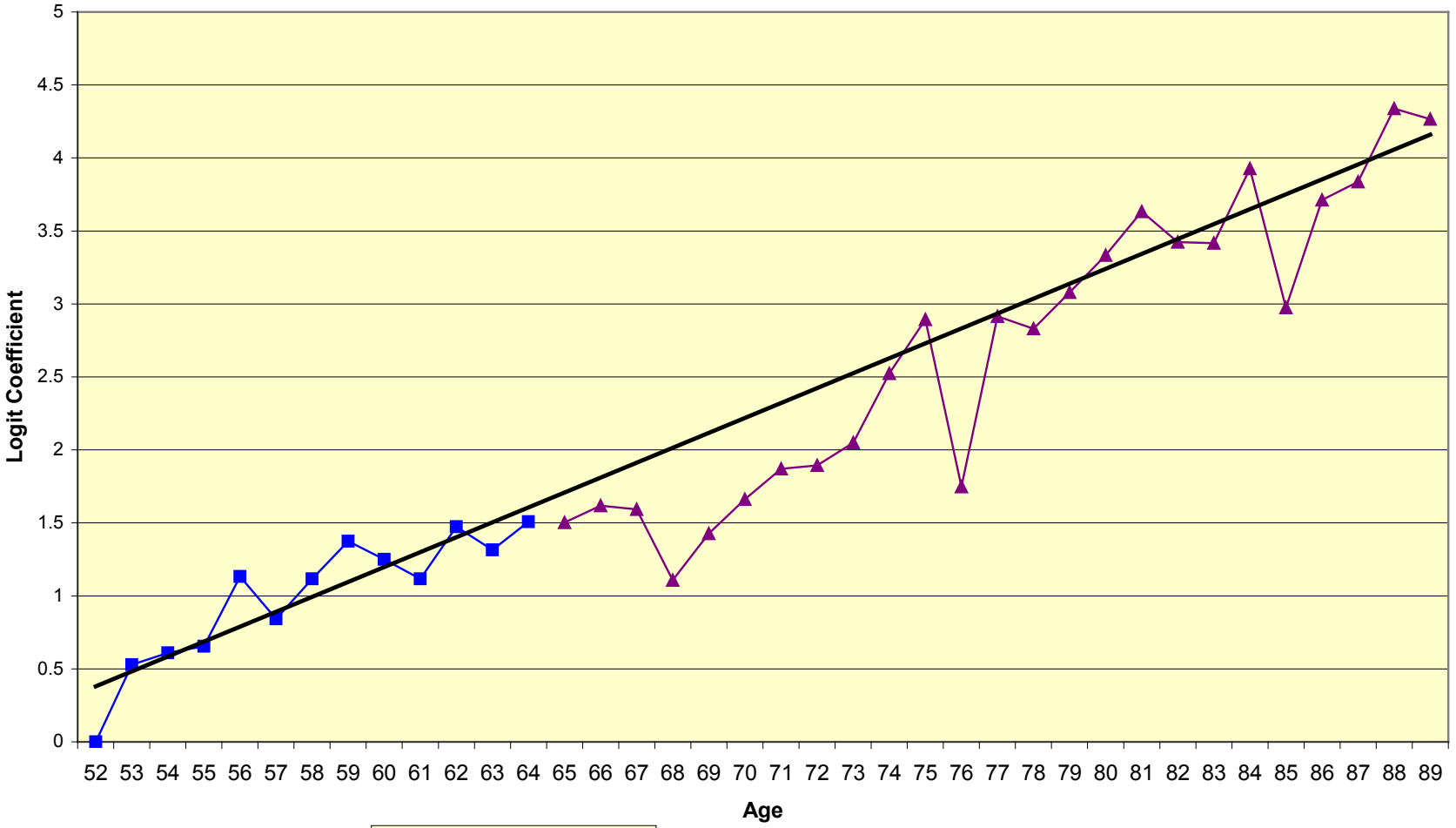
Work and Retirement, men



Work and Retirement, women

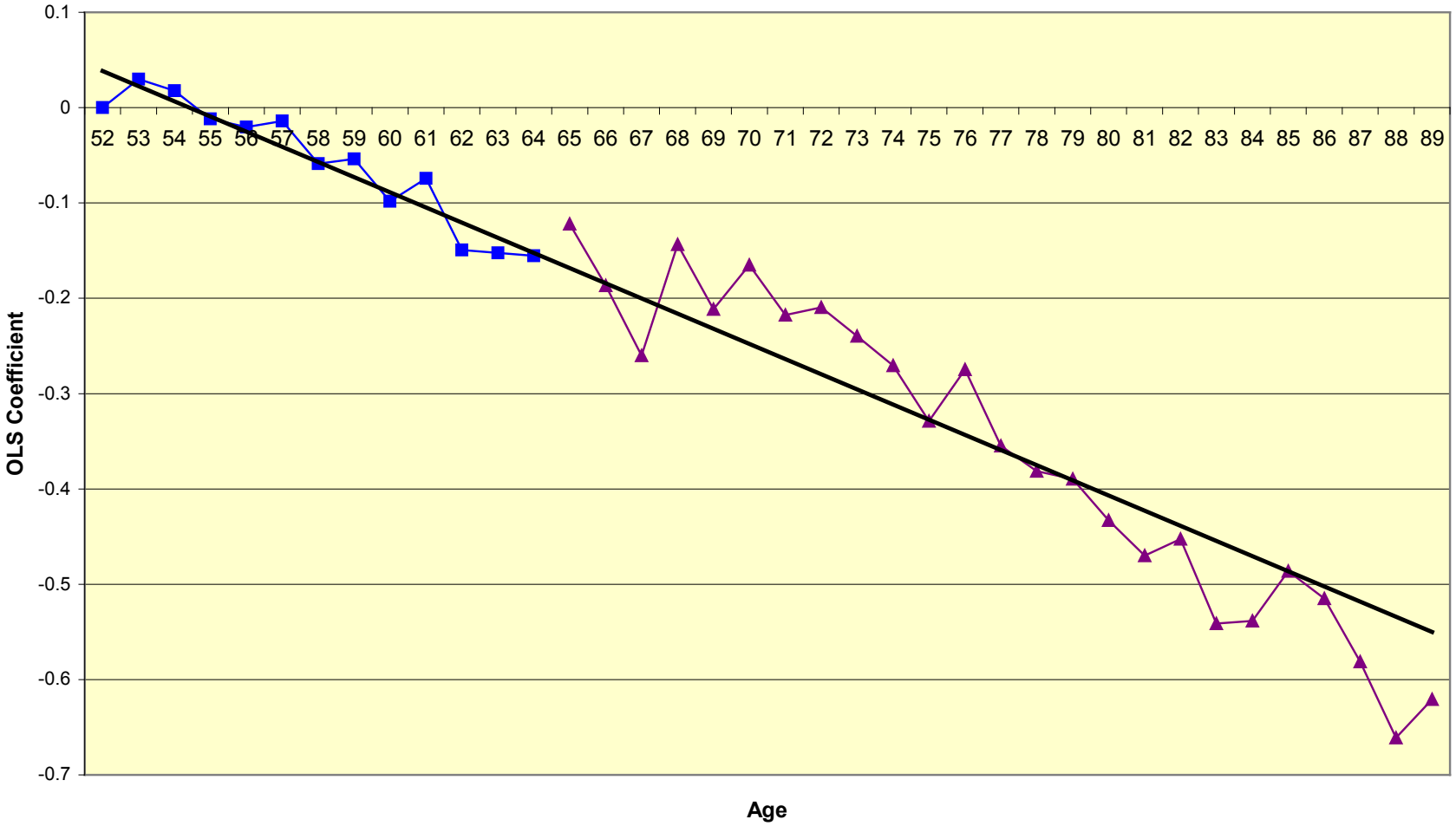


Stand/Balance Score<7, Men



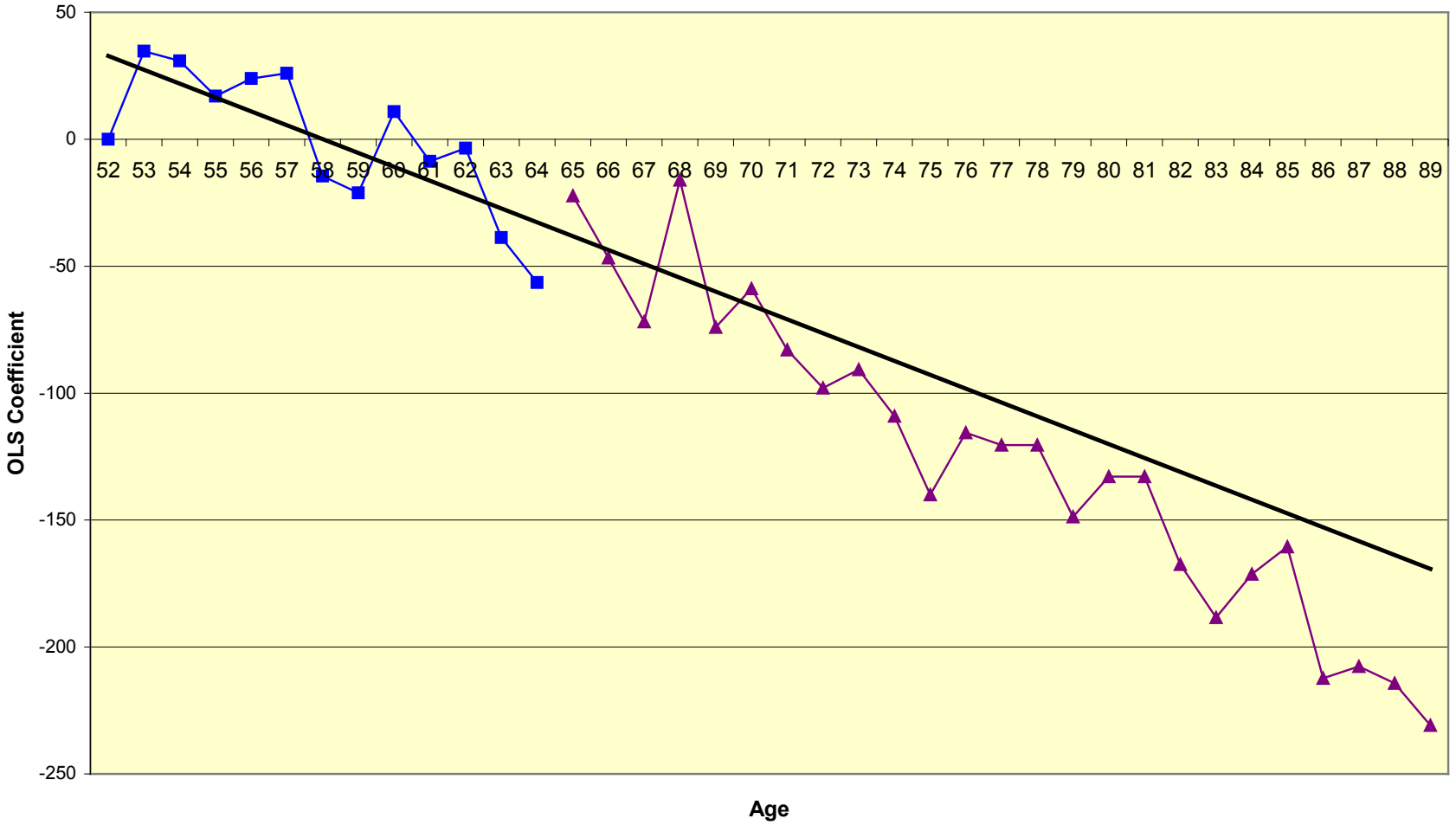
P-values
All Post NRA: 0.213
First 10 years: 0.017

Grip Strength (ln Kg), Men



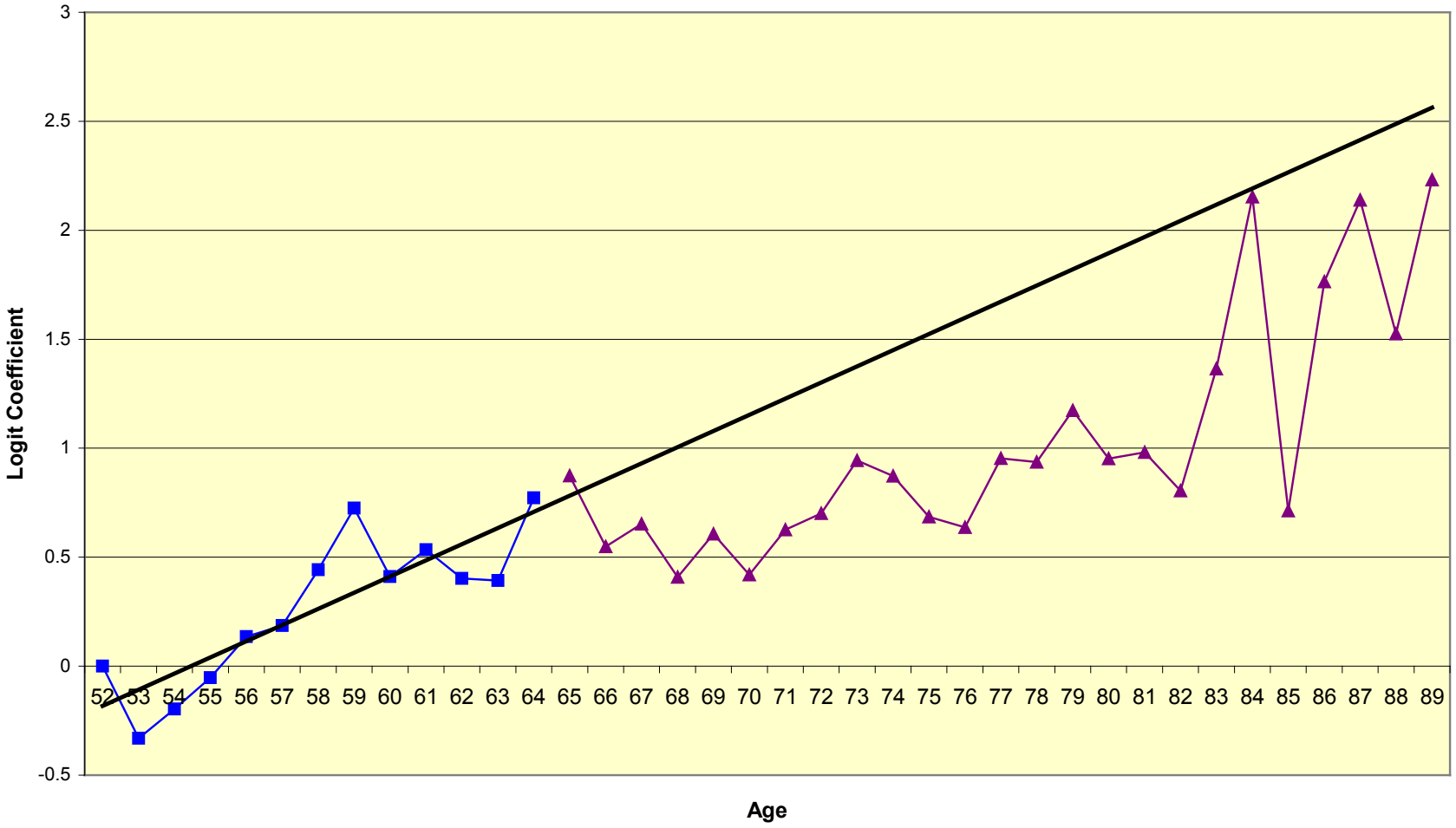
P-values
All Post-NRA: 0.000
First 10 years: 0.000

Peak Flow (liters/min), Men



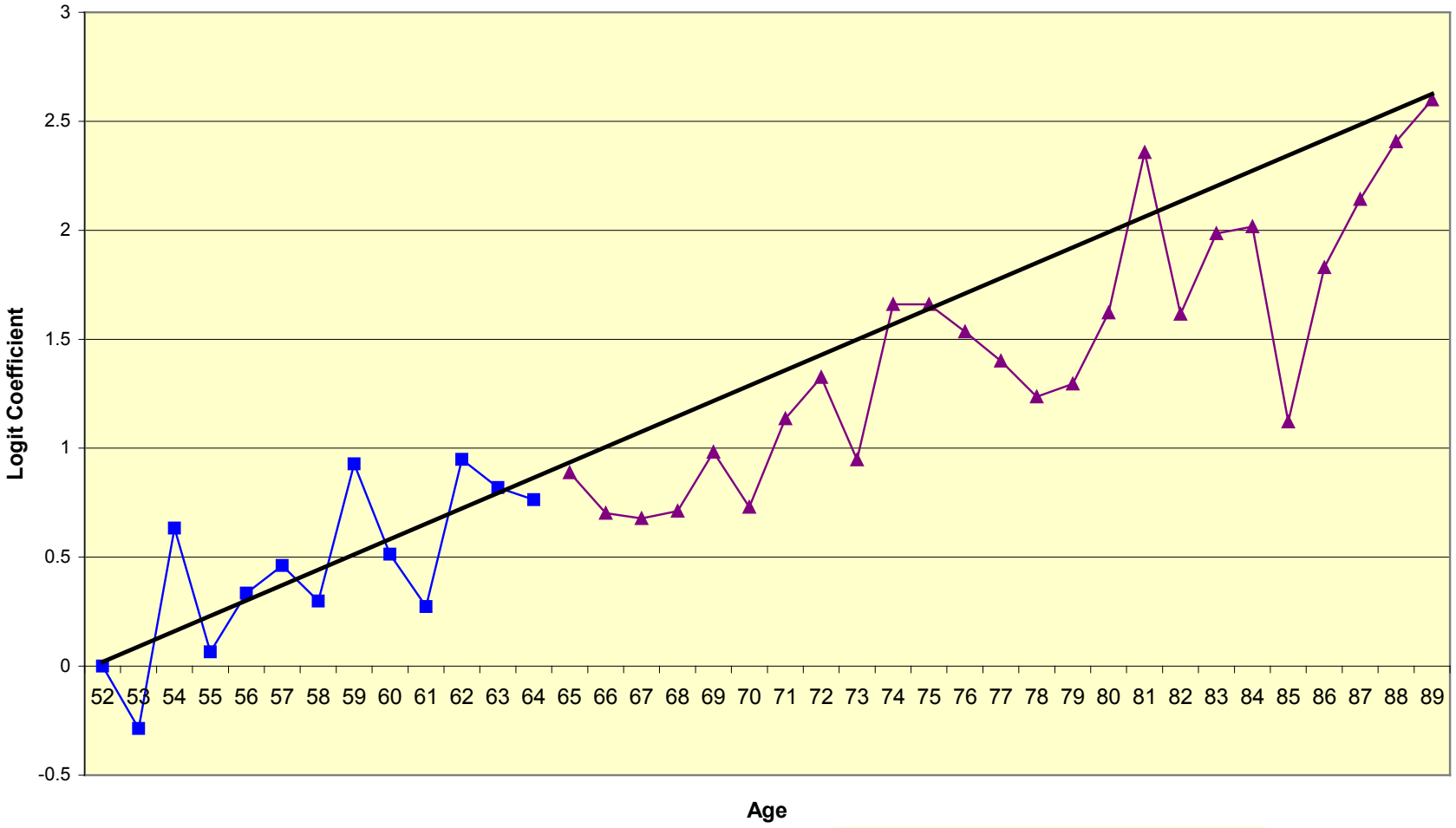
P-values
All Post-NRA: 0.901
First 10 years: 0.381

Nagi Upper Body Limitation, Men



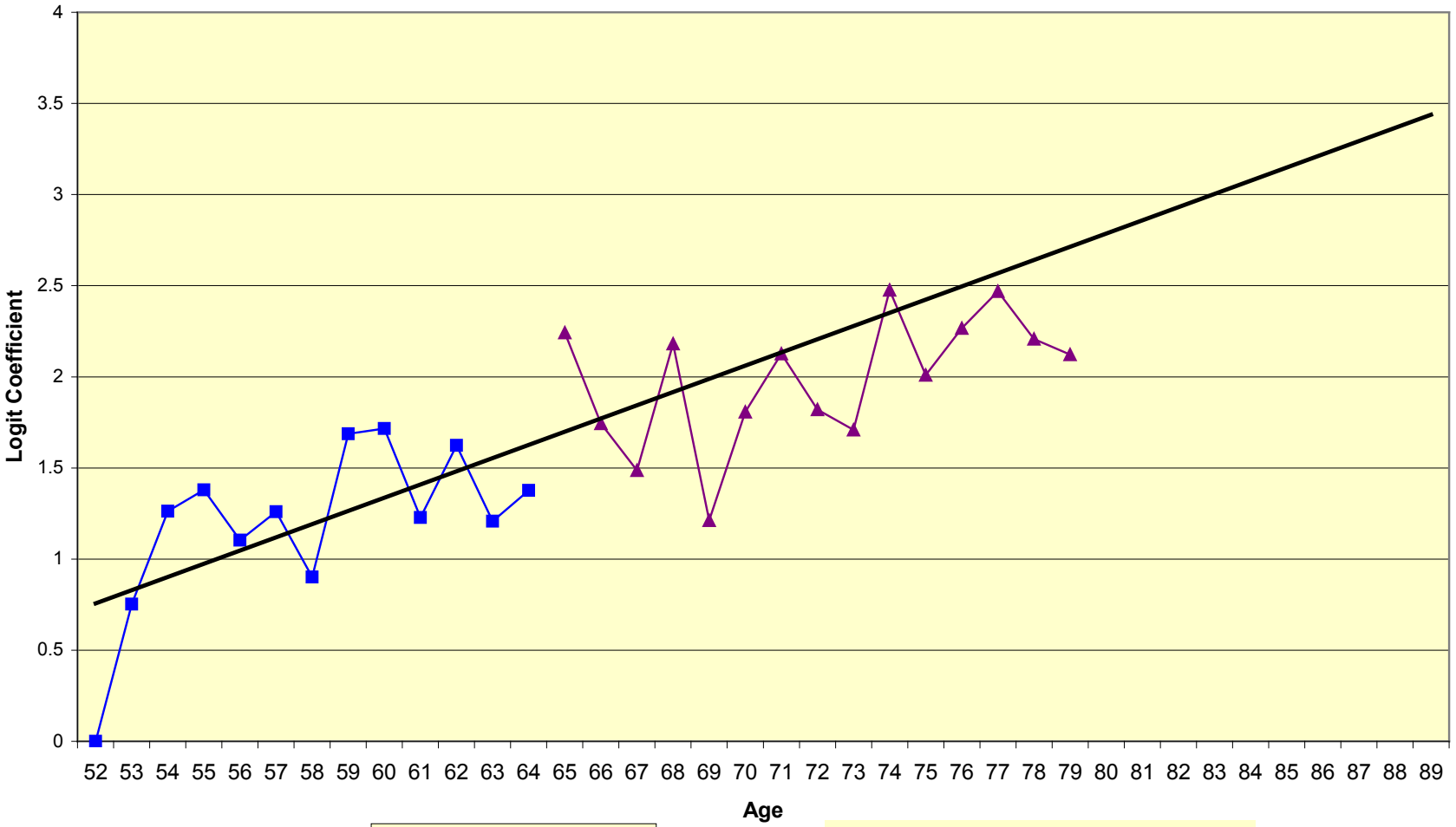
P-values
All Post-NRA: 0.000
First 10 years: 0.000

Nagi Lower Body Limitation, Men



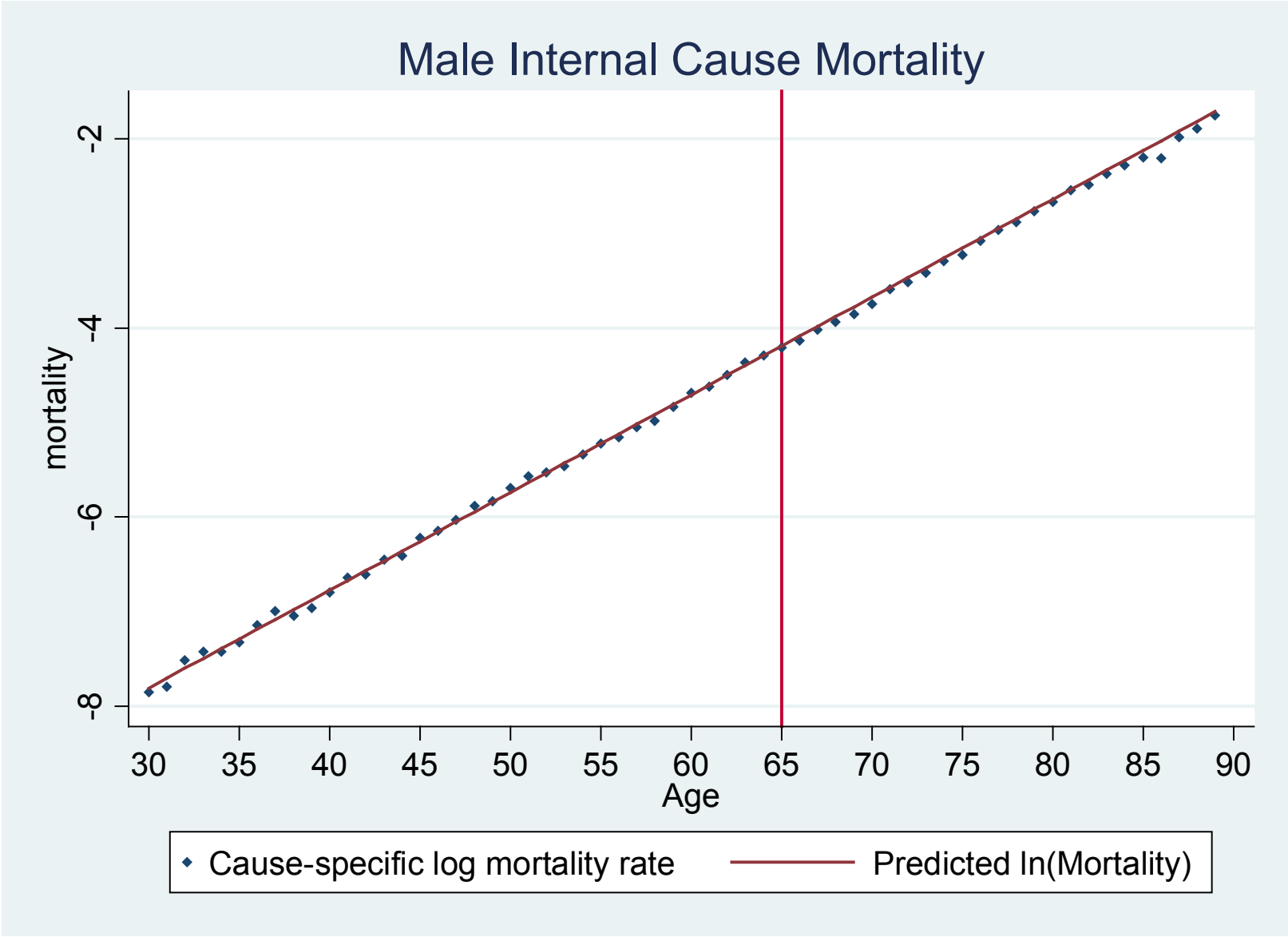
P-values
All Post-NRA: 0.000
First 10 years: 0.003

Self-Rep. Heart Disease/Diabetes, Men

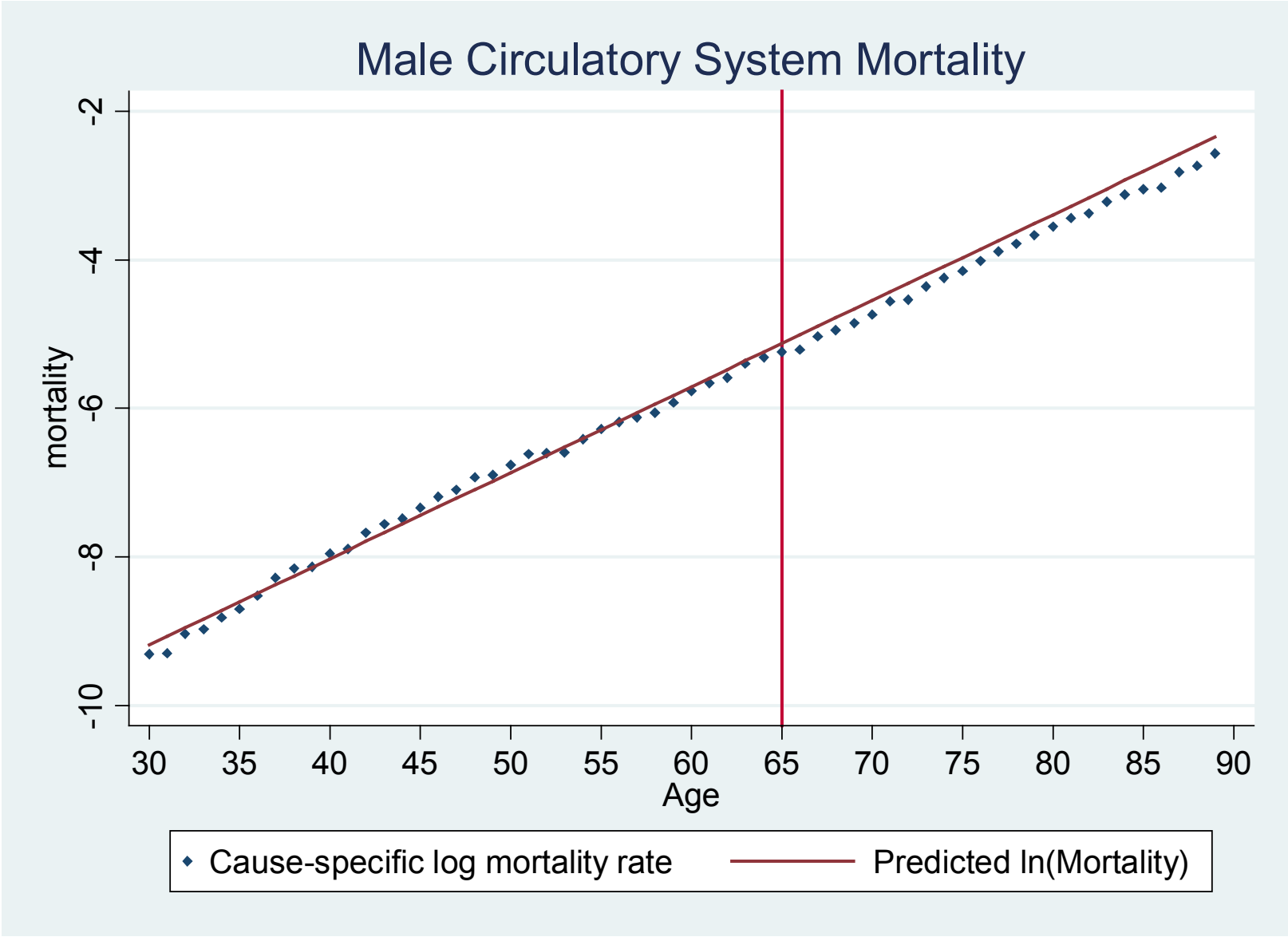


P-values
All Post-NRA: 0.444
First 10 years: 0.436

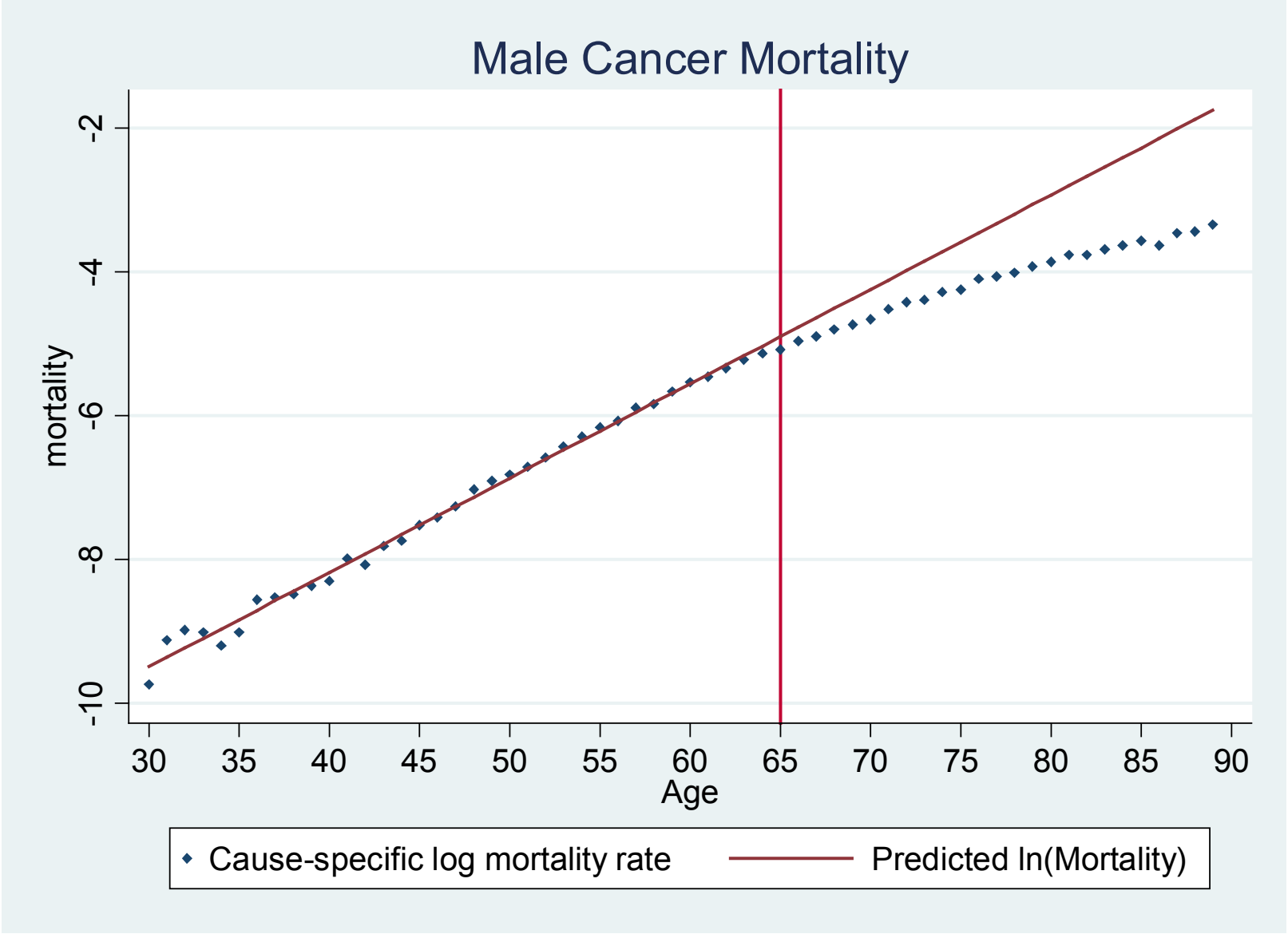
Internal Cause Mortality, Men



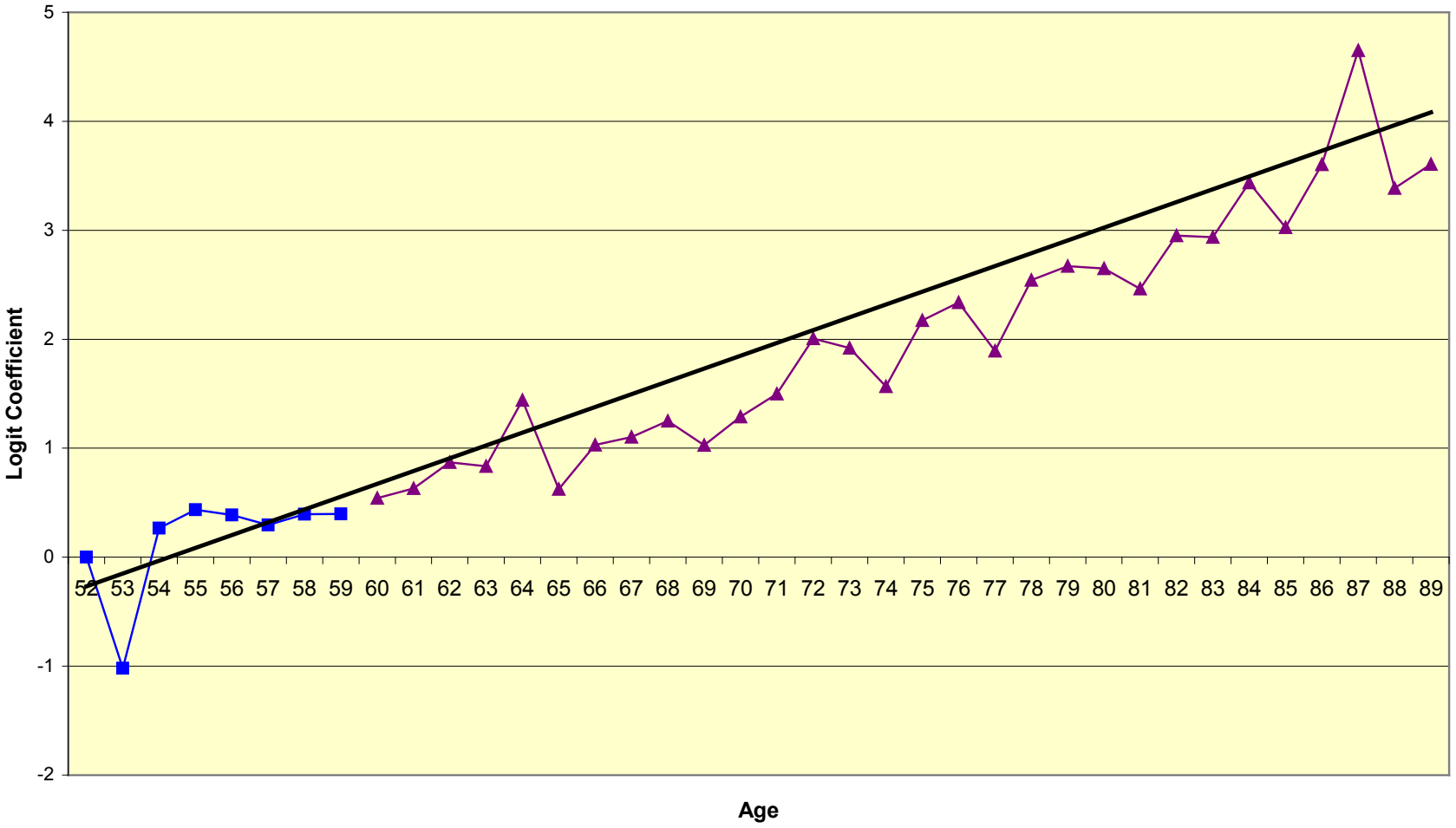
Circulatory System Mortality, Men



Cancer Mortality, Men

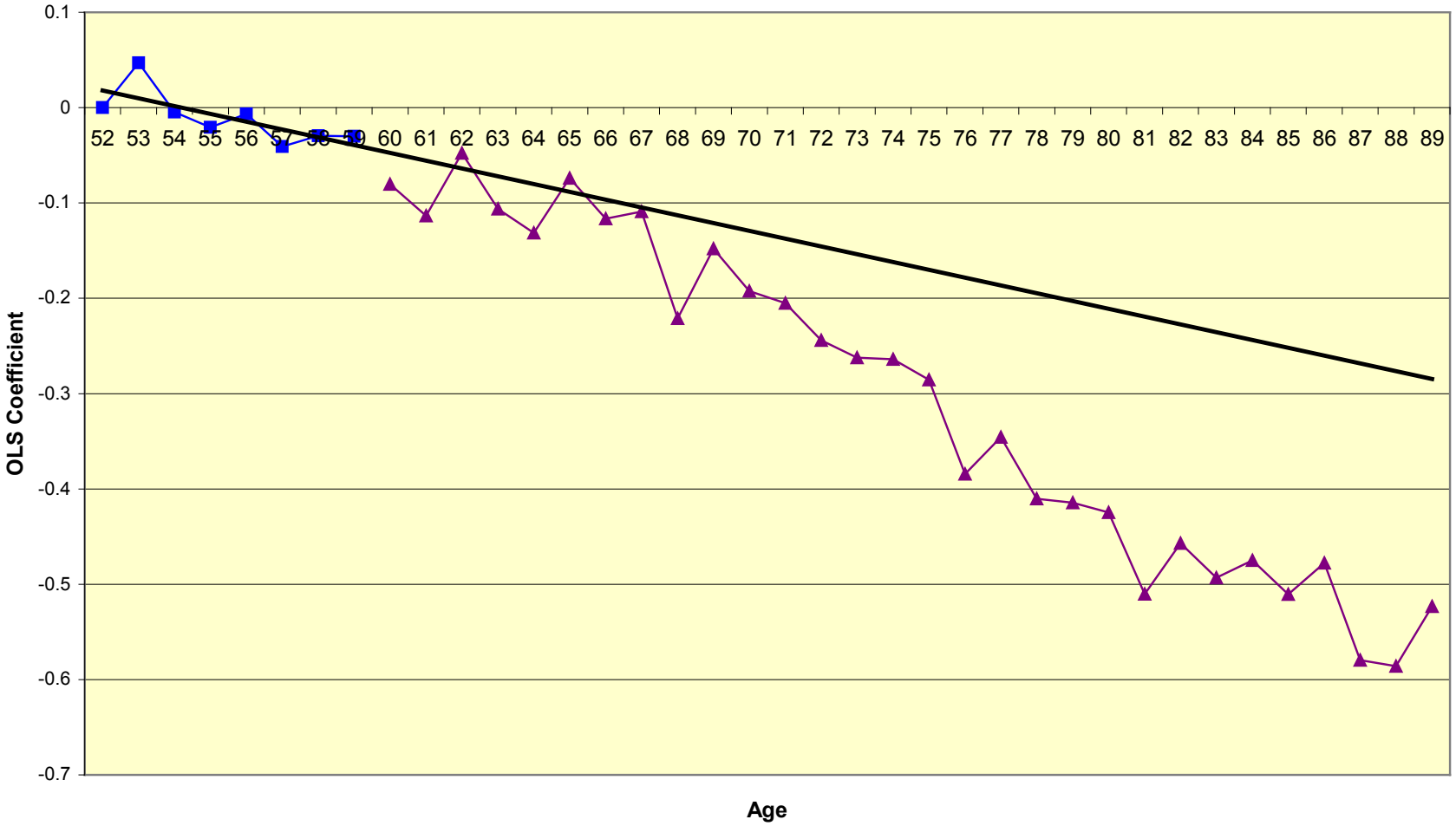


Stand/Balance Score<7, Women



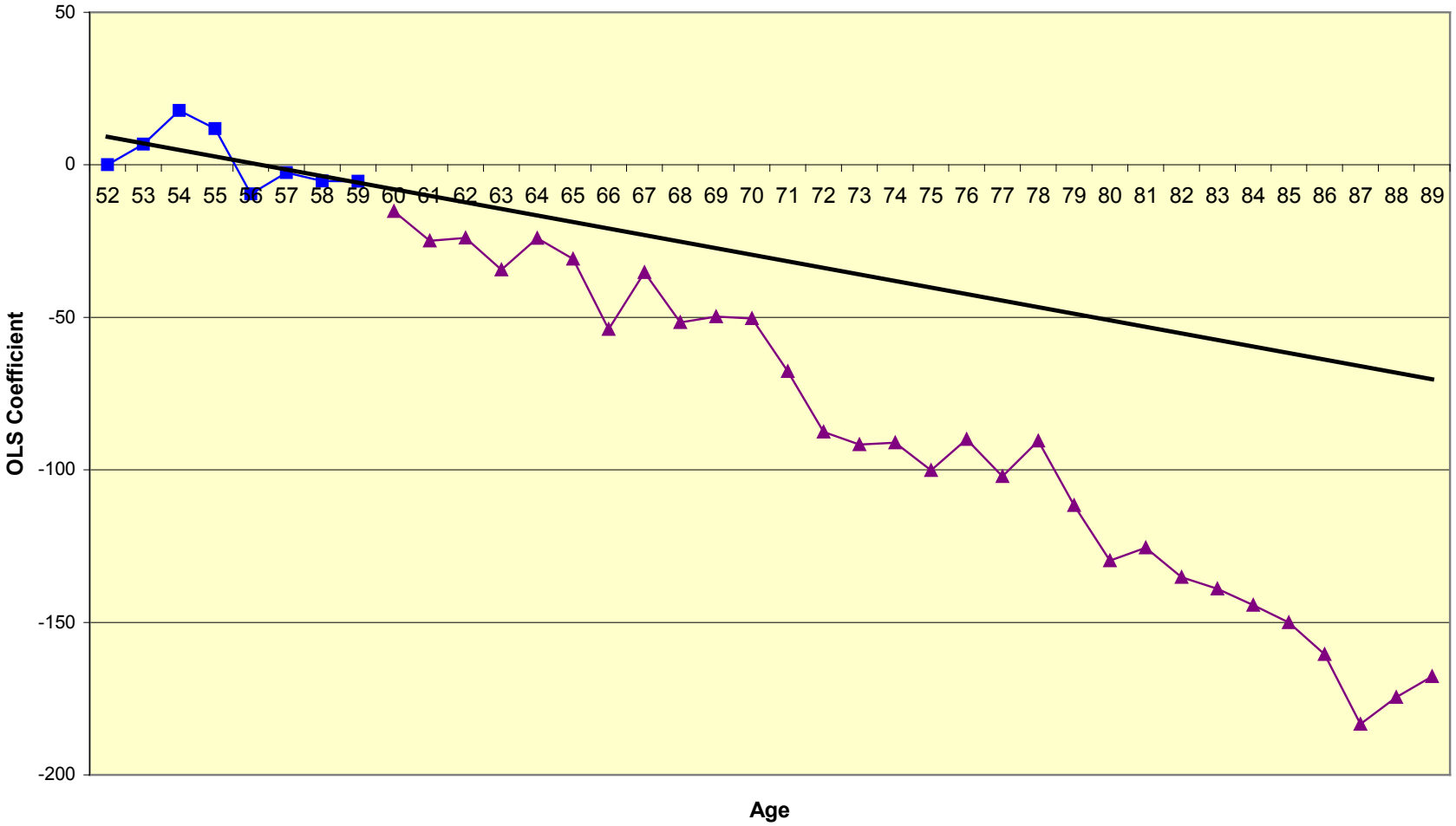
P-values
All Post-NRA: 0.091
First 10 years: 0.202

Grip Strength (ln Kg), Women



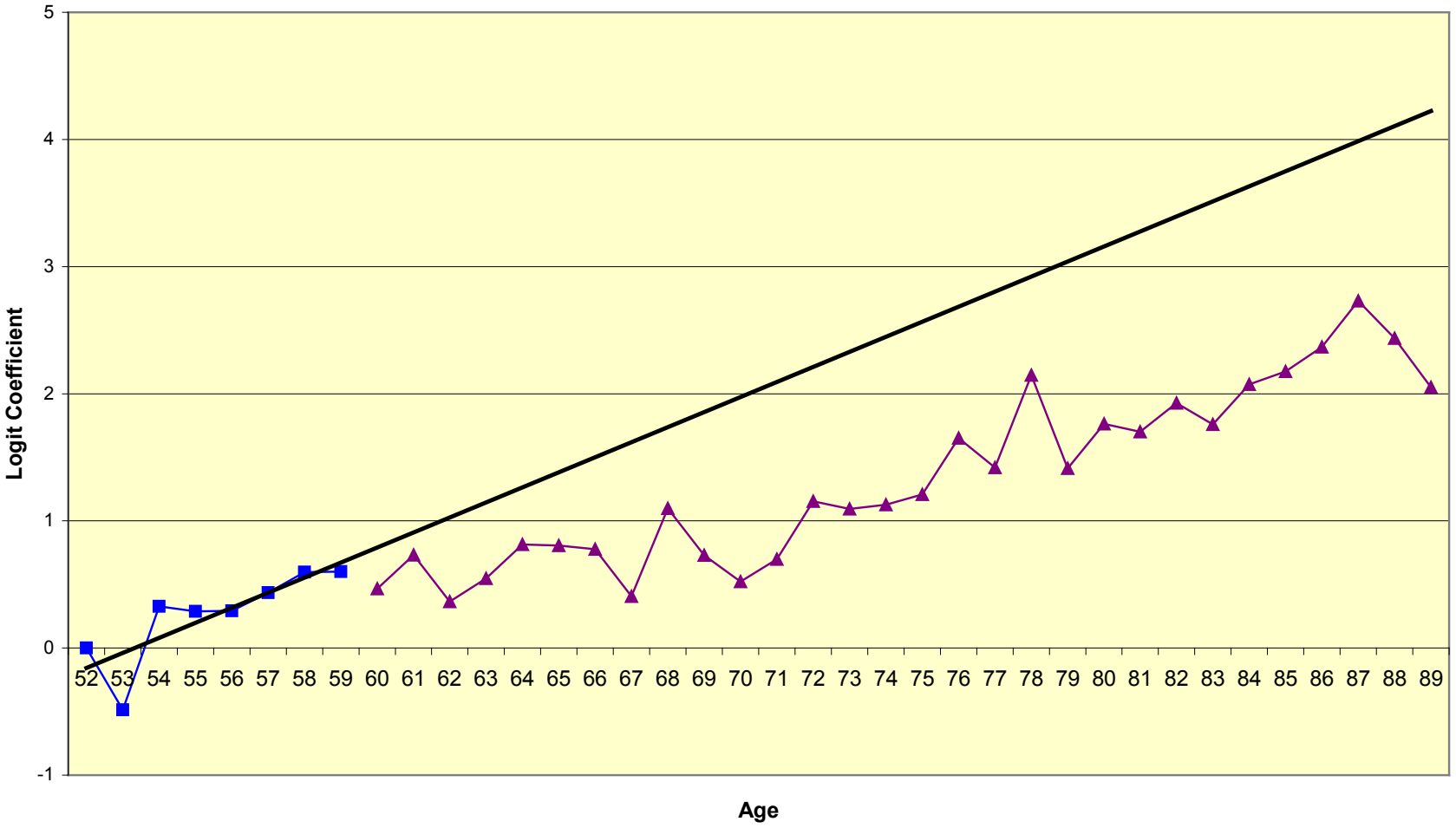
P-values
All Post-NRA: 0.002
First 10 years: 0.492

Peak Flow (liters/min), Women



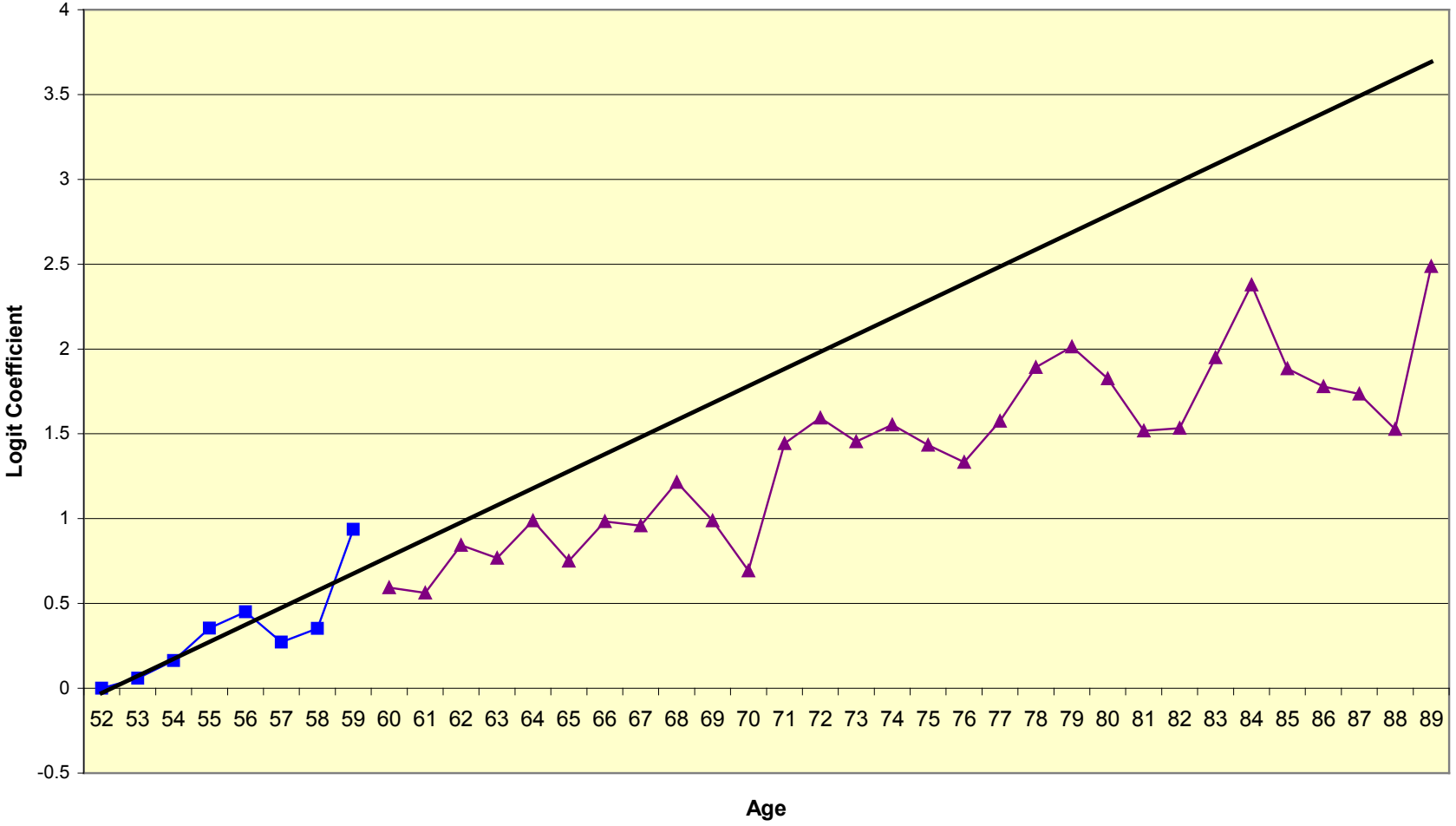
P-values
All Post-NRA: 0.000
First 10 years: 0.041

Nagi Upper Body Limitation, Women



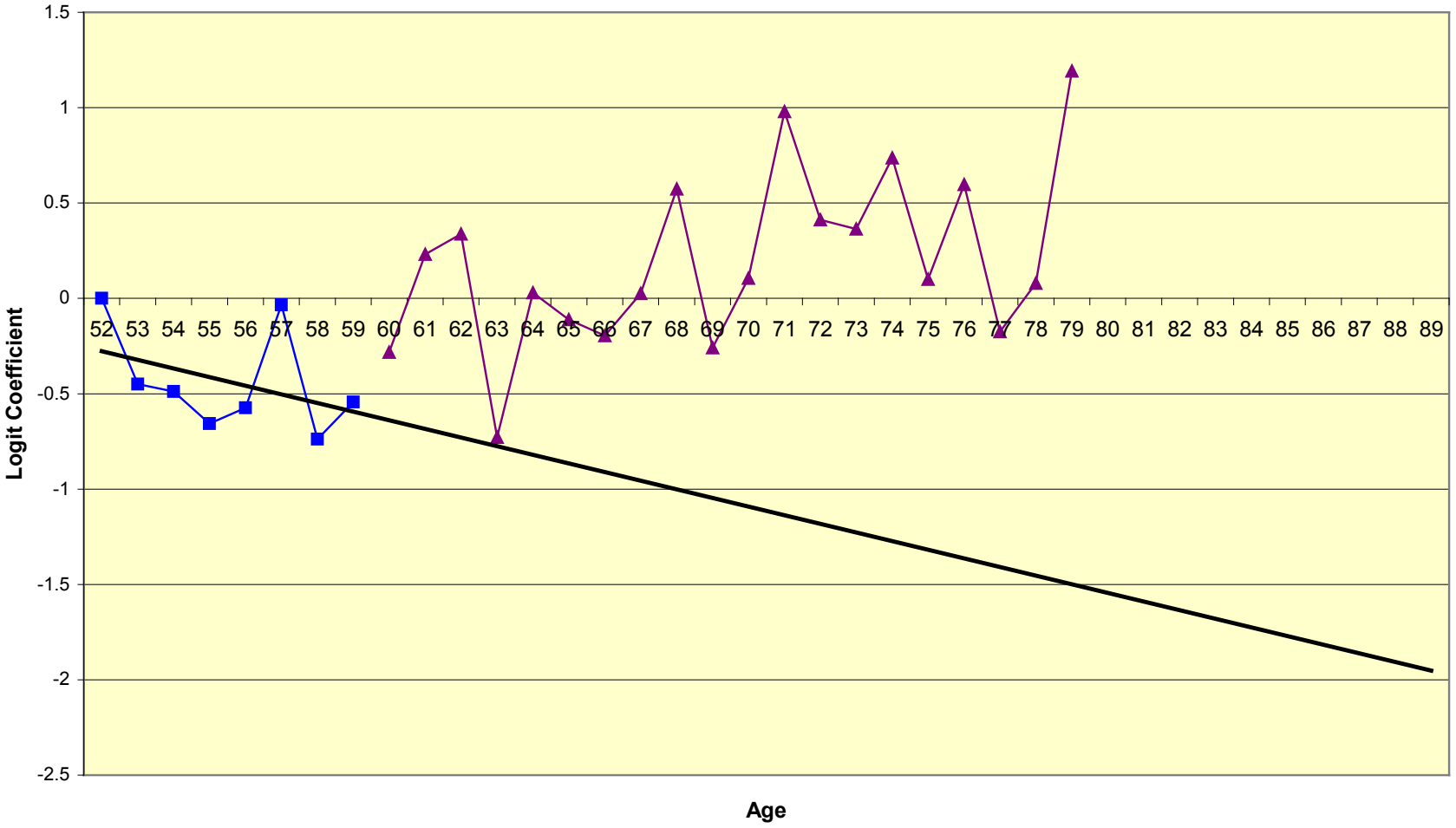
P-values
All Post-NRA: 0.000
First 10 years: 0.000

Nagi Lower Body Limitation, Women



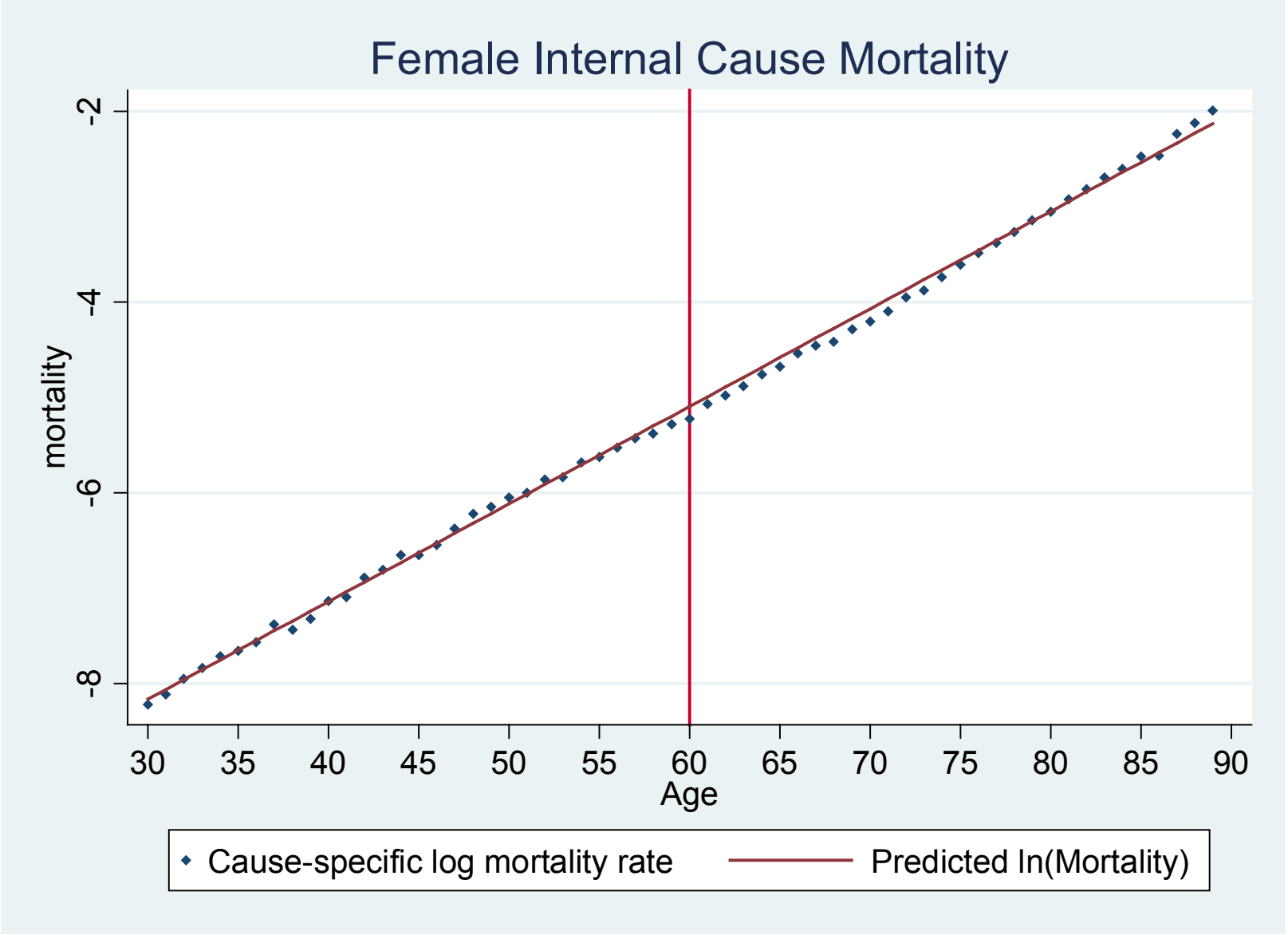
P-values
All Post-NRA: 0.000
First 10 years: 0.009

Self-Rep. Heart Disease/Diabetes, Women

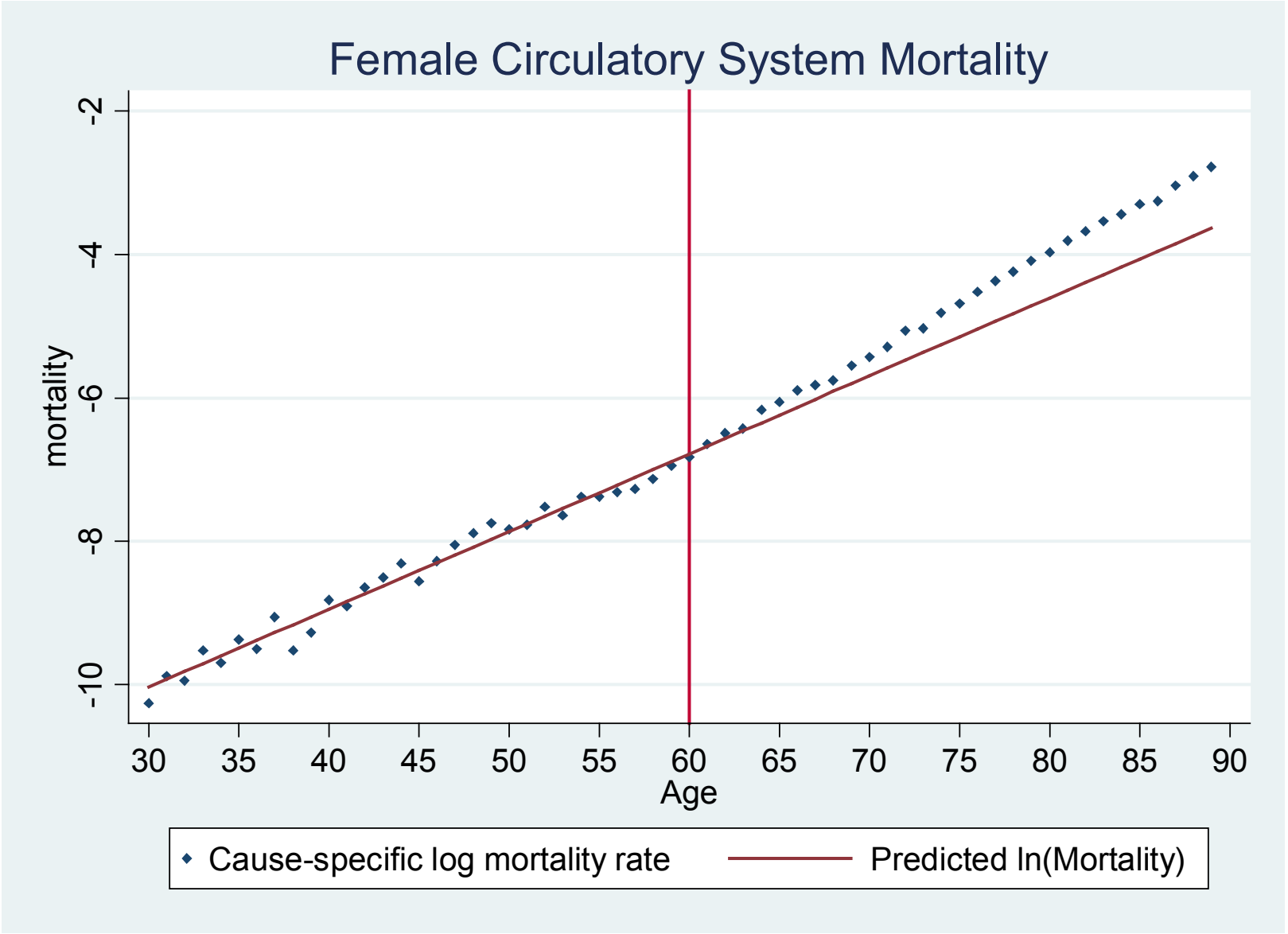


P-values
All Post-NRA: 0.000
First 10 years: 0.003

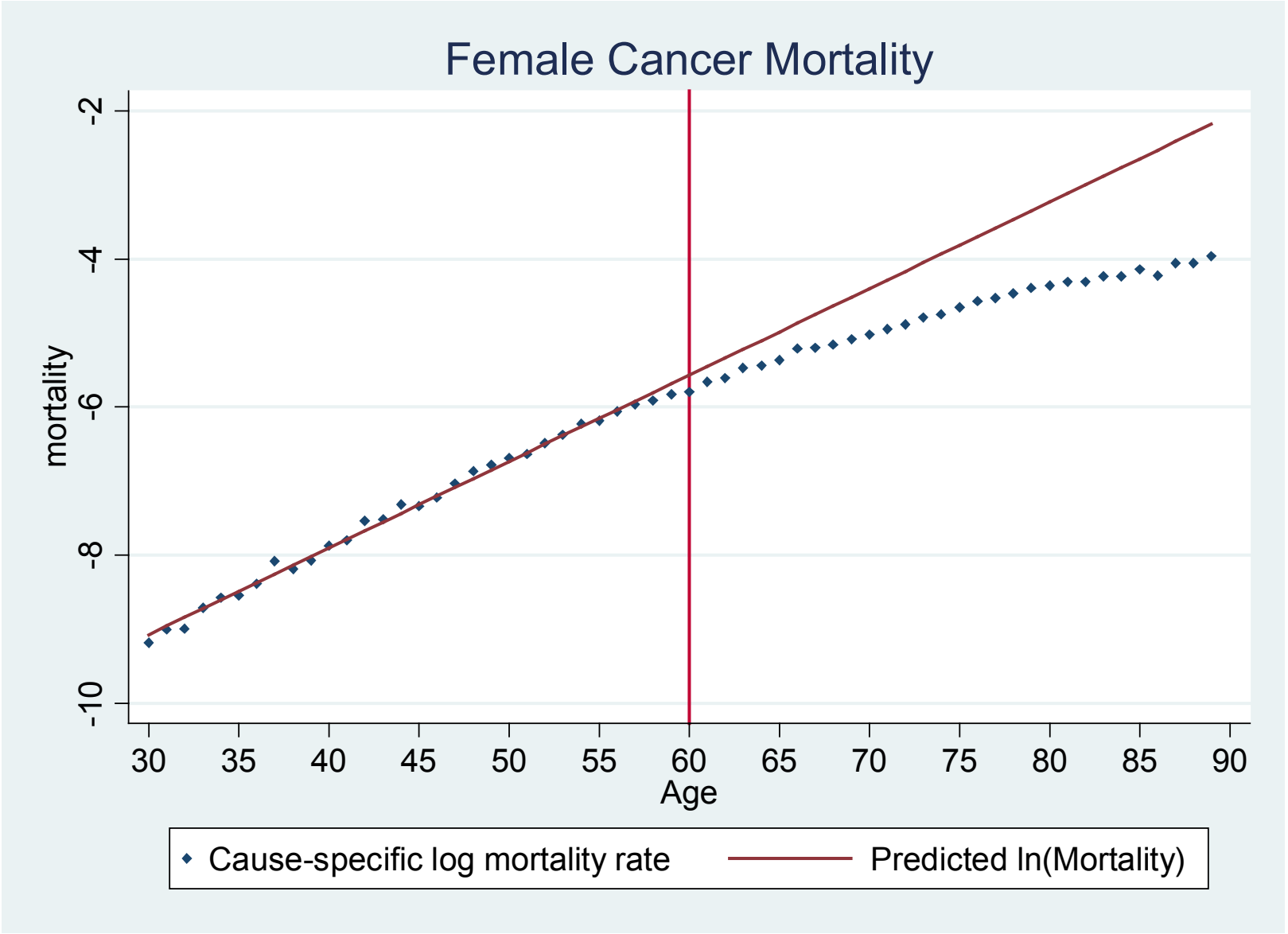
Internal Cause Mortality, Women



Circulatory System Mortality, Women



Cancer Mortality, Women



Stand/Blance Test

- **Stand:** Nurse asks respondents to stand from a sitting position without using their arms and then asks them to repeat this 5 times, while being timed.
- **Balance:** nurse directs respondents to stand in three separate positions (feet together side by side, slightly offset, and in the full tandem position, i.e., heel to toe) for about 10 seconds.

Heart/Diabetes Risk Factors

1. elevated triglyceride level
2. low levels of HDL cholesterol
3. high blood pressure
4. excessive waist circumference
5. elevated fasting blood glucose

Nagi Upper Body Limitation

because of a healt problem respondent has trouble doing any of the following:

1. Extending either arm above shoulder level.
2. Pulling or pushing large objects like a living room chair.
3. Lifting or carrying weights over 10 pounds (e.g a heavy bag of goceries).
4. Picking up a 5p coin from a table.

Nagi Lower Body Limitation

because of a healt problem respondent has trouble doing any of the following:

1. Sitting for about two hours
2. Getting up from a chair after sitting for long periods
3. Climbing several flights of stairs without resting
4. Climbing one flight of stairs without resting
5. Stooping, kneeling, or crouching